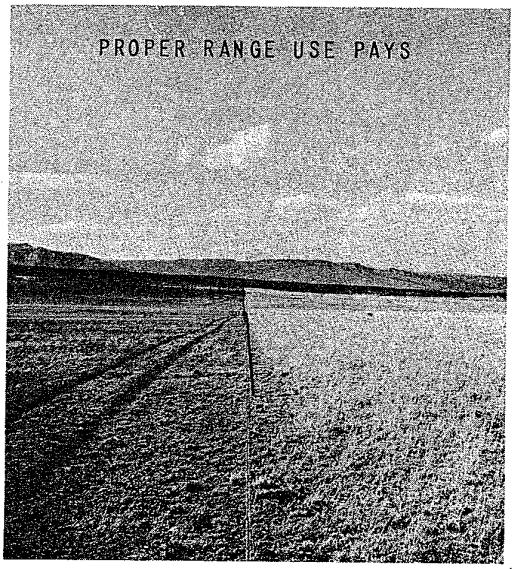
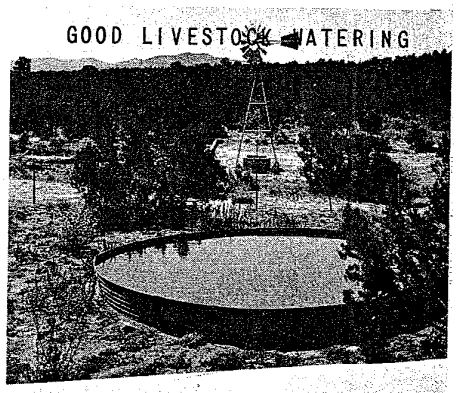
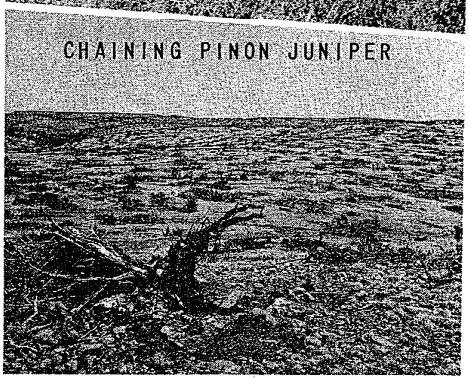
RANGE CONSERVATION - TECHNICAL NOTES







U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
NEW MEXICO

NOTE NO. 44

September 29, 1970

RE: Range Research

The following is an abstract of published range research. This research may have application as an alternative in assisting New Mexico ranchers develop and apply ranch conservation plans.

Martin, S. Clark, and Ward, Donald E. ROTATING ACCESS TO WATER TO IMPROVE SEMIDESERT CATTLE RANGE NEAR WATER, Journal of Range Management, Vol. 23, No. 1, Jan. 1970, pp. 22-26.

AO - 1 ea
Regional Range Conservationist
Adjoining States: Arizona, Colorado, Texas and Utah

11-64 4-L-19447

SUMMARY AND CONCLUSIONS

This study was set up to determine whether controlling access to water within a single range unit would lighten utilization and increase herbage production near water.

Only one water was open at a time, and the open water was changed about every 3 months. Each water was closed during the summer growing season 2 years out of 3. Cattle soon adjusted to the system. Cattle had to be driven away from the closed water only in the first fall-winter period. Within a year the cattle had learned to move to and use range where the water was open.

Utilization averaged 9% higher within 500 yards of water than at locations 1/2 mile or more from water. In general, utilization was high following years of low herbage production, and low following high production.

Distances between waters were not great enough to prevent cattle from grazing near those that were closed if forage was scarce. Therefore, seasonal opening and closing of water failed to show strong benefits to perennial grass stands near water, partly because the pasture was too small.

Perennial grass production within 500 yards of water was higher in 1966 than in 1959. Yields near water were about half as great as on transects 1/2 mile or more from water.

Slopes of 25 to 40% and partial barriers to cattle movements markedly reduced utilization. Average utilization between 100 and 500 yards from water for the five rotated waters was not significantly related to distance.

Average perennial grass production was higher near part-time water than near yearlong water, even though average differences in utilization were small.

Utilization near part-time water was lower than around yearlong water only if the part-time water was closed during the summer growing season and if average use in the pasture with part-time water was moderate to light.

The results of this study show that utilization of perennial grasses near water can be reduced and herbage production increased by periodically closing the water in summer. Little may be gained, however, by closing waters that are close together, as in a small pasture and closing water will not help if the entire range is closely grazed. The method should work best in large range units where cross-fencing is not feasible and watering places are far apart.